US Army Corps of Engineers
Construction Engineering Research Laboratory

U.S. Army CERL
P.O. Box 9005
Champaign, IL 61826-9005

Public Affairs Office
Phone: (217)-352-6511
Fax: (217) 373-7222
http://www.cecer.army.mil

Fact Sheet

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DATA EXCHANGE STANDARD FOR SCHEDULING SOFTWARE

The Problem

Due to the number and variety of Critical Path Method (CPM) scheduling programs commercially available, transferring project planning and progress update information between project participants is often difficult. Rather than re-type data from one system to another, many construction offices have used proprietary requirements for scheduling software. Since a number of protests of these proprietary specifications have been received, an alternative method must be found for electronic transfer of project planning data.

Construction offices have required contractors to purchase software and train construction office personnel in the use of that software. This approach has also elicited protests since the expense to purchase software and train government employees can amount to over $15,000 per project. Even if these funds were expended by the contractor, government personnel turnover and limited use of each software system would require continuous training for government employees using the various systems.

Several companies have developed direct translation software that allows some relief from the problem of data transfer. However, each vendor must spend significant resources to provide up-to-date versions of this translation software. When a software system is updated, each vendor must ensure compatibility with all other transferable systems.

Simply stated, a generic and consistent method of exchanging project planning and progress information between software systems must be developed and used.

The Technology

In collaboration with scheduling software vendors, construction management consultants, professional associations, and other Federal agencies, the U.S. Army Corps of Engineers Construction Engineering Research Laboratory (CERL) has facilitated the development of a Standard Data Exchange Format (SDEF) for scheduling software. This standard uses a 132-character fixed field; an ASCII file to specify the position, length, and definition of all required project planning and control information. Since most scheduling software can already export ASCII data, software vendors can easily revise existing export routines to provide the data in the SDEF.

In addition to a draft technical provision that describes the SDEF, a draft special clause has also been developed to provide guidelines for usage of those data items. This draft special clause was developed over a course of several years with the Alaska, Los Angeles, Mobile, Omaha and Savannah Corps of Engineers Districts.

Benefits/Savings

Project office personnel may save as many as 30 hours per month on large projects since they will not have to manually enter schedules, updates and changes. Time saved could then be used for schedule monitoring and updating--further increasing the benefits of using the modern project management techniques.

The SDEF impacts other areas besides data entry at the project office. These areas include: 1) coordination of submission and procurement data with the project schedule; 2) schedule analysis programs; 3) interfaces between scheduling, estimating and computer-aided design software; 4) integrated schedule and accounting systems; and 5) direct data entry into the Resident Management System (RMS).

Status

In 1986, CERL conducted a survey of software vendors whose products were commonly used by the Corps in response to a protest of a Corps of Engineers Seattle District proprietary scheduling specification. The eight vendors unanimously agreed that some type of standard exchange format should be developed. Furthermore, the vendors also volunteered resources to create the necessary import and export routines if a standard format could be agreed upon. In 1988, CERL facilitated two meetings with these vendors and others to discuss a proposed data-exchange format.

In March 1990, an initial data exchange format was specified in Corps of Engineers Regulation ER 1-1-11, Progress, Schedules, and Network Analysis Systems. Based upon limited use of the format, several minor changes were suggested and a revised format was created in early 1993. The SDEF is currently required, by guide specification, for military program construction contracts where computerized scheduling is to be used.

The Chief of Engineers announced the SDEF to software vendors in August 1993. Of the 30 vendors requesting information on the format, six vendors (covering approximately virtually all scheduling at Corps of Engineers construction field offices) submitted software for testing in July 1994. The following software currently supports the SDEF. These vendors are AlderGraf (Mr. Leon Alderfer, 713-467-8500); DLW cpm (Mr. David Webber, 972-690-1954); Open Plan (713-558-0514); PMS-80 (Mr. Perry Smith, 503-293-6280); PPMS (Mr. Justin Smith, 214-929-1877); Primavera version 2.0 (610-668-3030).

There are a variety of resources available including an informational brochure, guide specifications, and demonstration SDEF checking software available on the World Wide Web.

Point of Contact

CERL POC is E. William East, COMM 217-373-6710; toll-free 800-USA-CERL; FAX 217-373-6724; e-mail b-east@cecer.army.mil, or CERL, ATTN: CECER-CF-N, P.O. Box 9005, Champaign, IL 61826-9005.

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